

REMARKS

Claims 1 and 11-30 remain pending. Independent claim 1 has been amended to distinguish over the prior art of record. No new matter was added. Accordingly, Applicants respectfully submit that the present application is in condition for allowance.

I. Claim Rejections - 35 USC §103(a)

In the FINAL Office Action dated July 2, 2009, claims 1 and 11-30 are rejected under 35 USC §103(a) as being obvious over JP 11-011478 A and JP 11-350122 A.

Applicants respectfully submit that the claims of the present application, as amended, are patentable over JP '478 in view of JP '122 for each of the following reasons.

A. Wheels Enabling Man-Powered Transport

In the FINAL Office Action, it is readily acknowledged that the outer box (8) of JP '478 and its bottom plate (6) lack "wheels" for man-powered transport of the double box container. However, claim 1 is rejected based on the prior art because the separate machine-powered fork-lift truck used to lift the double box container would include wheels. More specifically, the following is stated in the FINAL Office Action concerning the "wheels" limitation of independent claim 1 of the present application:

"Regarding the claim language requiring wheels being mounted directly to the bottom plate, the limitation requiring 'directly' has not been claimed."

Accordingly, in view of this comment, independent claim 1 of the present application has been amended to require that "wheels for man-powered transport are mounted directly to and integral with said bottom plate adjacent only a rear edge of said bottom plate". No new matter was added; for example, see FIG. 2 of the present application, as filed.

Applicants respectfully submit that the cited combination of references clearly fails to disclose, suggest or teach the structure required by independent claim 1, as amended, of the present application and fails to render such structure obvious to one of ordinary skill in the art with respect to sputtering target transport.

B. Requirement that the Transport Box be Inclined during Man-Powered Transport

Claim 1 of the present application defines that the structure of the outer box of the transport box must be inclined during man-powered transport for the wheels of the transport box to be engaged with an underlying floor and to support the weight of the transport box. For example, claim 1 requires a structure in which “the outer box is supported on said wheels only when the outer box is inclined on a floor face”.

In the FINAL Office Action, it is stated that when a fork lift truck is engaged to the outer box (8) of JP ‘478, the outer box (8) is supported by wheels of the fork lift truck and is at an incline since a side of the outer box (8) is supported by the forklifts and a side farthest from the fork lift truck is unsupported. Applicants respectfully disagree and request reconsideration.

The length of forklifts will always be greater than the length of a pallet to ensure safe and careful lifting of the pallet. In the situation described by the Examiner, a side of the pallet is completely unsupported; however, such an arrangement would never be acceptable to one of ordinary skill in the art with respect to transporting large glass plates or substrates such as those disclosed by JP ‘478. Such an arrangement would clearly result in undesired torque and like forces being applied to the glass substrates. To avoid applying such stress to the glass substrates, the forklifts would extend the complete length of the pallet (6) to provide equal support to the

end nearest the fork lift truck and the end farthest away from the fork lift truck. Also, the pallet would not be supported at an inclined angle for fear of mishandling or damaging the glass plates.

Still further, claim 1 of the present application requires the wheels (which are directly mounted on and integral with the bottom plate of the outer box of the transport box) to be “on a floor surface” when the transport box is in an inclined position. In addition, the claim requires the transport box to be transported under man-power without the use of a separate fork lift truck when the box is in the inclined position.

Accordingly, Applicants respectfully submit that the cited combination of references clearly fails to disclose, suggest or teach the structure required by independent claim 1, as amended, and fails to render such structure obvious to one of ordinary skill in the art with respect to sputtering target transport.

C. Cushioning of Sputtering Target within Inner Box

In the FINAL Office Action, the member (58) in FIG. 4 of JP ‘478 having guide grooves (60) for supporting the opposite ends of glass panels is interpreted as a “retention frame” required by claim 1 of the present application. This aspect of the present invention has been further defined in claim 1 to further distinguish claim 1 of the present application over the cited combination of references.

Claim 1 has been amended to require the extension frame to extend continuously around the sputtering target and support the peripheral edge of the sputtering target. No new matter was added. For example, see retention frame (10) and void (15) in FIG. 1 of the present application, as filed.

In addition, claim 1 has been amended to require the lower and upper plates within the inner box to cushion and buffer the opposite faces of the sputtering target such that the plate-shaped sputtering target is entirely encapsulated and cushioned by the retention frame and lower and upper plates. No new matter was added; for example, see FIG. 1 and page 4, lines 11-16, of the present application, as filed.

One of ordinary skill in the art following the teachings of JP '478 would support a sputtering target or other plate-like article by placing only the opposite side edge margins of the article within support grooves. For example, see FIG. 4 of JP '478. However, the remainder and vast majority of the article including opposite faces and upper and lower outer peripheral edges would be unsupported by any further structure of JP '478 and would neither be cushioned nor buffered upon impact.

In contrast, the transport box of the present invention engages and supports all surfaces of the plate-like sputtering target. The outer peripheral edge is supported by the "retention frame" about the entire peripheral edge (see FIG. 1). In addition, the opposite faces of the sputtering target are sandwiched between the upper and lower plates within the inner box which cushion and buffer the sputtering target from adjacent surfaces of the inner box.

Thus, unlike JP '478, the present invention permits safe transport of brittle or mechanically-weak sheets in a horizontal state and there is no possibility of fracture due to forces being exerted on unsupported sections of the sheets adjacent supported side edge margins.

Accordingly, Applicants respectfully submit that the cited combination of references clearly fails to disclose, suggest or teach the structure required by independent claim 1, as amended, of the present application and fails to render such structure obvious to one of ordinary skill in the art with respect to sputtering target transport.

D. Requirement that Height of Supports be Greater than that of the Wheels

The cited references clearly fail to disclose this structural limitation recited in claim 1 of the present application. However, in the FINAL Office Action, this limitation is deemed obvious as being merely directed to dimensions. Applicants respectfully disagree.

Applicants respectfully submit that this claim limitation is not directed solely to a specific dimension; rather, it defines a clear structural configuration beyond that of mere dimensions. According to this structural requirement, the transport box is supported on the stationary supports when positioned level on an underlying support surface such as the floor of a building or the floor of a truck. This prevents unwanted movement and shifting of the transport box if the transport box was otherwise supported on the wheels in this condition. However, when man-powered transport of the transport box is desired (such as throughout rooms and hallways of buildings), the transport box is inclined such that it is supported on the floor surface via its own set of wheels. The prior art clearly fails to disclose and obviate such a transport box structure and relation of supports/wheels.

Accordingly, Applicants respectfully submit that the cited combination of references clearly fails to disclose, suggest or teach the structure required by independent claim 1, as amended, of the present application and fails to render such structure obvious to one of ordinary skill in the art with respect to sputtering target transport.

E. Requirements of Claim 11

Claim 11, as amended, of the present application requires a handle mounted on a side face of the outer box opposite the wheels at a location above the bottom plate and supports such that, when the transport box is inclined during man-powered transport, the handle can be gripped

by a user to support the transport box in an inclined position on the wheels on a floor. No new matter was added; for example, see the side face of the outer box and the location of the handle above the bottom plate and supports illustrated in FIGs. 1 and 2 of the present application.

In the FINAL Office Action, the “hollows” (4) in the pallet (6) are interpreted to be “handles”. However, these “hollows” are not located on the sidewalls (16, 18) of the outer box (8) of JP ‘478, they are not located opposite the wheels, and they are not located above the bottom plate (i.e., pallet (6)) and the supports of the bottom plate (i.e., the walls of the pallet (6) that define the hollows (4)).

Accordingly, Applicants respectfully submit that the cited combination of references clearly fails to disclose, suggest or teach the structure required by dependent claim 11, as amended, of the present application and fails to render such structure obvious to one of ordinary skill in the art with respect to sputtering target transport.

F. Requirements of Claims 14, 19, 23 and 26

Claims 14, 19, 23 and 26, as amended, of the present application require a through-type hold provided on the inner box adjacent an upper rim of the inner box to simplify removal of the inner box from the outer box. No new matter was added; for example, see the holds (14) and the rim of inner box (11) in FIG. 1 of the present application, as filed.

In the FINAL Office Action, the “hollows” (68) provided adjacent the base of the inner box (50) of JP ‘478 are interpreted to be the above referenced through-type hold. However, JP ‘478 makes clear that these “hollows” (68) enable the inner box (50) to be picked up via a fork lift truck independent of the outer box (8). In addition, from careful inspection of the drawings, it is clear that forklifts extending through the “hollows” (4) of the pallet (6) are cleared to extend

throughout the full length of the pallet (6) through the “hollows” (68) of the inner box (50). For example, note the placement of the bottom wall (70) of the inner box (50) in FIG. 5 of JP ‘478 and note the placement of the hollows (4) in the sides of the pallet (6) which clearly is above the elevation of the bottom wall (70) and in alignment with the recesses (68) of the inner box (50).

Accordingly, the hollows or recesses (68) of JP ‘478 are not adjacent an upper rim of the inner box and cannot simplify removal of the inner box from the outer box.

Therefore, Applicants respectfully submit that the cited combination of references clearly fails to disclose, suggest or teach the structure required by dependent claim 11, as amended, of the present application and fails to render such structure obvious to one of ordinary skill in the art with respect to sputtering target transport.

For all of the above reasons, Applicants respectfully request reconsideration and removal of the §103(a) rejection of claims 1 and 11-30 as being obvious over JP ‘478 in view of JP ‘122.

II. Conclusion

In view of the above amendments and remarks, Applicants respectfully submit that the claim rejections have been overcome and that the present application is in condition for allowance. Thus, a favorable action on the merits is therefore requested.

Please charge any deficiency or credit any overpayment for entering this Amendment to our deposit account no. 08-3040.

Respectfully submitted,
Howson & Howson LLP
Attorneys for Applicants

By William Bak/
William Bak
Reg. No. 37,277
501 Office Center Drive
Suite 210
Fort Washington, PA 19034
(215) 540-9216